

HD
329/10
Please replace the paragraph beginning on page 5, line ¹⁵~~16~~, with the following amended paragraph:

--Referring to FIGS. 4a-e, there is presented the deployment sequence from a stowed state of minimized volume (FIG. 4a), to deployed and rigid locked state of maximized volume (FIGS. 4c, d, and e). Referring to FIG. 4a, there is shown the present invention in a partially disassembled state for storage and transport. Truss elements 20a-h are in their flattened and simultaneously curved states. Since the array of truss elements are equally spaced around the peripheries of end rings 11a, 11b, and 12, the net axial forces are balanced to effect zero net load on the collapsed structure, thus making it stable, and requiring little to zero holding force to keep it in this position. Referring FIG. 4b, there is seen the present invention in a minimum volume assembled state. Referring to FIG. 4c, there is shown the beginning of the extension process, wherein upper tube assembly 27 is pulled or extended away from rocker assembly 28. It is possible to also add automated means to allow for a controlled deployment, but in the present invention, upper tube assembly 27 is very easily lifted away from rocker assembly 28. Referring to FIG. 4d, truss elements 20 assume their straightened, but flattened, state. In this state, the entire structure lacks substantive rigidity, as adjacent truss elements are positioned in parallel pairs 20a/b, 20c/d, 20e/f, and 20g/h. These pairs have nearly equal length attachment points, as can be seen from FIG. 4-d. Referring to FIG. 4e, there is witnessed a rotation of deployment ring 12 which in the preferred embodiment is shown as the outer of the two rings 11b, and 12. These concentric rings 12 and 11b allow for alternating attachment of truss elements 20a-h. Attached to fixed inner ring 11a 11b are truss ends 20a,c,e,g. Attached to outer rotationally moveable deployment ring 12 are affixed truss ends 20b,d,f,h. Thus, in the stowed state, deployment ring 12 is rotated to create parallel pairs of trusses 20a/b, 20c/d, 20e/f, and 20g/h. This is necessary in that all truss elements are of about equal length in order to triangulate into the fully rigid deployed truss structure of FIG. 4e. In order for truss pairs 20a/b, 20c/d, 20e/f, and 20g/h have equal curvatures when stowed, given that each pair shares a common attachment point on upper tube assembly end ring 11a, ~~outer deployment ring 12~~ 12 therefore rotates to bring opposing ends of each pair very close to one another as shown in FIG. 4d. After initial deployment to the state shown in FIG. 4d, outer deployment ring 12 rotates with respect to inner ring 11b by somewhat less than 90 degrees, to effect a separation and triangulation of truss pairs 20a/b, 20c/d, 20e/f, and 20g/h. This condition is shown in FIG. 4f. Finally, all trusses become very stiff and rigid by folding truss outrigger beams 24 with respect to central beam 21 to create a triangular cross sectional moment of inertia, as shown in FIG. 2.--